

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/001169

International filing date (day/month/year)
21.01.2005

Priority date (day/month/year)
20.02.2004

International Patent Classification (IPC) or both national classification and IPC
H04L29/06, H04L29/12, H04L29/08

Applicant
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2005/001169

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-4,6-19,21-34
	No: Claims	5,20
Inventive step (IS)	Yes: Claims	-
	No: Claims	1-34
Industrial applicability (IA)	Yes: Claims	1-34
	No: Claims	-

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

- 1 The following documents cited in the International Search Report are referred to in this communication:

D1: WO 00/56034 A (3COM CORPORATION) 21 September 2000 (2000-09-21)
D2: US 2003/233475 A1 (MAUFER THOMAS ALBERT ET AL) 18 December 2003 (2003-12-18)
D3: US 2002/042875 A1 (SHUKLA JAYANT) 11 April 2002 (2002-04-11)
D4: DE 101 28 493 A1 (INTERNATIONAL BUSINESS MACHINES CORP., ARMONK) 3 January 2002 (2002-01-03)

- 2 The present application does not meet the criteria mentioned in Article 33(1) PCT, because the subject-matter of independent **claims 5 and 20** is not novel in the sense of Article 33(2) PCT, while the subject-matter of independent **claims 1, 8, 16, and 23** does not involve an inventive step in the sense of Article 33(3) PCT.

- 2.1 Document **D1**, which is considered to represent the closest prior art, discloses in accordance with features of **claim 20** (the references in parentheses applying to this document):

A communication method using a request issuance equipment ("first network device"; Fig. 1, ref. 14) provided in a communication system (see Fig. 1, ref. 10), wherein a server apparatus ("Router"; Fig. 1, ref. 26) and a plurality of equipments (Fig. 1, refs. 14, 16, 18, 20, 22, 24) including the request issuance equipment and a request acceptance equipment ("Server"; Fig. 1, ref. 39) are each connected to a network, the request issuance equipment being operable to communicate with the server apparatus and the request acceptance equipment (see Fig. 1), said communication method comprising:

- (a) transmitting a first TCP connection start signal ("TCP request") to the server apparatus for establishing a first TCP connection with the server apparatus (see Fig. 10, ref. 142);

- (b) transmitting a first connection request signal which includes an equipment ID ("DST IP", "DST Port"; see Table 2) of the request acceptance equipment, and an IP address ("SRC IP"; see Table 2) and a port number ("SRC Port"; see Table 2) as associated with the request issuance equipment, and which is a request to the request acceptance equipment, to the server apparatus using the first TCP connection (see Fig. 10, ref. 144 and Fig. 19, ref. 276);
- (c) after receiving a communication request signal for requesting a communication between the request issuance equipment and the request acceptance equipment from the request acceptance equipment (see Fig. 22, ref. 306), accepting the communication between the request issuance equipment and the request acceptance equipment in response to the communication request signal, and starting the communication with the request acceptance equipment (see Fig. 22, ref. 310).

- 2.2 As a consequence, **claim 20** does not comply with the provisions set out in Article 33(2) PCT due to lack of novelty of its subject-matter.
- 2.3 Referring to the objection raised above, **claim 5** does also not comply with the requirements of Article 33(2) PCT since its subject-matter corresponds to that of **claim 20**, whereas **claims 1, 8, 16, and 23** do not comply with the requirements of Article 33(3) PCT as their subject-matter is additionally related to the periodic transmission of equipment registration signals for the regular update of the equipment lists at the server apparatus and thus represents a common measure to the person skilled in the art.
- 2.4 Moreover, it should be noted that the teachings of documents **D2-D4** (see cited passages in the International Search Report) taken alone are highly relevant for the question of inventive step (Article 33(3) PCT) regarding the subject-matter of **claims 1, 5, 8, 16, 20, and 23**.
- 2.5 It is pointed out that even if the Applicant were to interpret independent **claims 5 and 20** in such a manner as to enable him to allege that their subject-matter were novel, based on minor differences between the technical features of these claims and those disclosed in **D1**, the subject-matter of said claims would still not involve

an inventive step (Article 33(3) PCT) over said document, especially as it discloses the same object (i.e., providing a secure proxy-based end-to-end TCP communication) and the same type of solution as claimed in said claims.

- 3 Additionally, dependent **claims 2-4, 6, 7, 9-15, 17-19, 21, 22, and 24-34** do not appear to contain any additional features which, either alone or in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to inventive step (Article 33(3) PCT) since their subject-matters (implementation details on providing trustworthiness of the server and the key distribution process across the network components) are either known from the prior art (documents **D1-D4**; see cited passages in the International Search Report) or merely represent minor design options to the person skilled in the art (e.g., based on the standardised IKE/ISAKMP or SSL/TLS key exchange protocols).

Re Item VII

Certain defects in the International Application

- 1 The independent claims are not properly drafted in the two-part form recommended by Rule 6.3(b) PCT and do not include reference signs in parentheses to increase their intelligibility according to Rule 6.2(b) PCT.
- 2 The most relevant prior art documents are not properly acknowledged in the description part according to Rule 5.1(a)(ii) PCT.

Re Item VIII

Certain observations on the International Application

The present application does not meet the requirements of Article 6 PCT, the reason being as follows:

The subject-matter of **claims 2, 4, 5, 7, 8, and 11**, phrased as apparatus claims, is defined by method steps ("...server apparatus transmits...and receives..."; "...said request issuance/acceptance equipment accepts/causes/starts/receives/transmits...") rather than in terms of structural features of an apparatus. Hence, the category of these claims is unclear

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(see PCT Guidelines, 5.12).